

EXHIBIT 81



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Welcome to Exchange Partnerships Executive Conference 2019

May 2019

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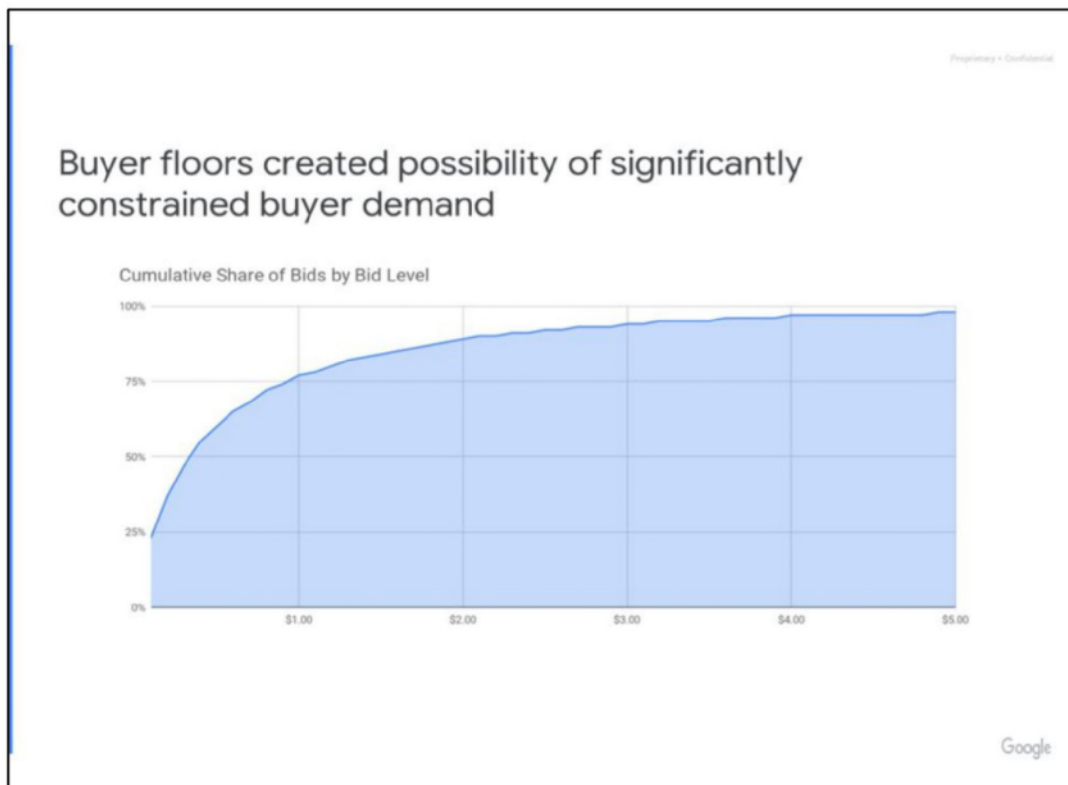
And there are benefits: Buyer floors going away with launch of Unified 1st Price Auction

- In a 2nd price auction, per-**Buyer Floors** used to extract short term value from buyers
- On 1P auction world, less relevant
- Apply advertiser-specific floors to manage channel conflict



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- 2P auction, per-buyer floors are useful to extract short term value from buyers. This becomes less relevant in a 1st price auction (explained with examples subsequently)
- Publishers currently using per-buyer floors to manage channel conflict, will still be able to do so by applying advertiser-specific floors
- Publisher using per-buyer floor to manage ads quality concerns, can do so via the Protections UI; we constantly keep investing in improving our protections and advertiser classifications to protect publisher brands




- **\$0.50 - 60%**
- **\$1.00 - 77%**
- **\$2.50 - 92%**
- **\$5.00 - 98%**

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And there are benefits: Anonymous is being deprecated to improve transparency

- Anonymous is non compliant with IAB's ads.txt
- Anonymous non verifiable by buyers and potential vector for fraud
- Improved transparency will increase long term programmatic revenue sustainability



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SIMPLICITY

Easier to understand auction dynamics: all net bids from indirect programmatic sources compete directly in a single unified auction (vs previous 2 stage auction) , where the winners pay exactly what they bid

Convenient control of floors within Ad Manager: new unified pricing rules that apply uniformly across all buyers (Authorized Buyers, Open Bidding and non-guaranteed tags)

Simpler floor pricing strategy: reduced need to constantly optimize floors to reduce auction discount. Buyers pay what they bid (no bid-price discount) and floors don't directly impact clearing price

SUSTAINABILITY

This change helps create a more sustainable programmatic marketplace for publishers and buyers.

Today, buyers struggle to optimize when bidding across different channels due to lack of symmetry: different auction rules and different floor prices can apply for the same impression. Publishers have complex monetization strategies that are hard to maintain in the long term. For both, the outcome of the auction are not always clear (who wins and why)

With this change

All indirect demand, including non-guaranteed line items, compete on equal footing (i.e same rules) in the same unified auction; all buyers have an equal opportunity to

win an impression

No competing offers will set the price paid by another buyer, (i.e. removing non-guaranteed line items from calculating the Ad Manager reserve price) , and the highest eligible bid wins the auction

TRANSPARENCY

Increased transparency on auction dynamics: complete visibility into every single programmatic bid on every auction through data transfer files (currently in limited alpha)

* Similar benefit for Admob partners, although some of the changes only apply to Ad Manager

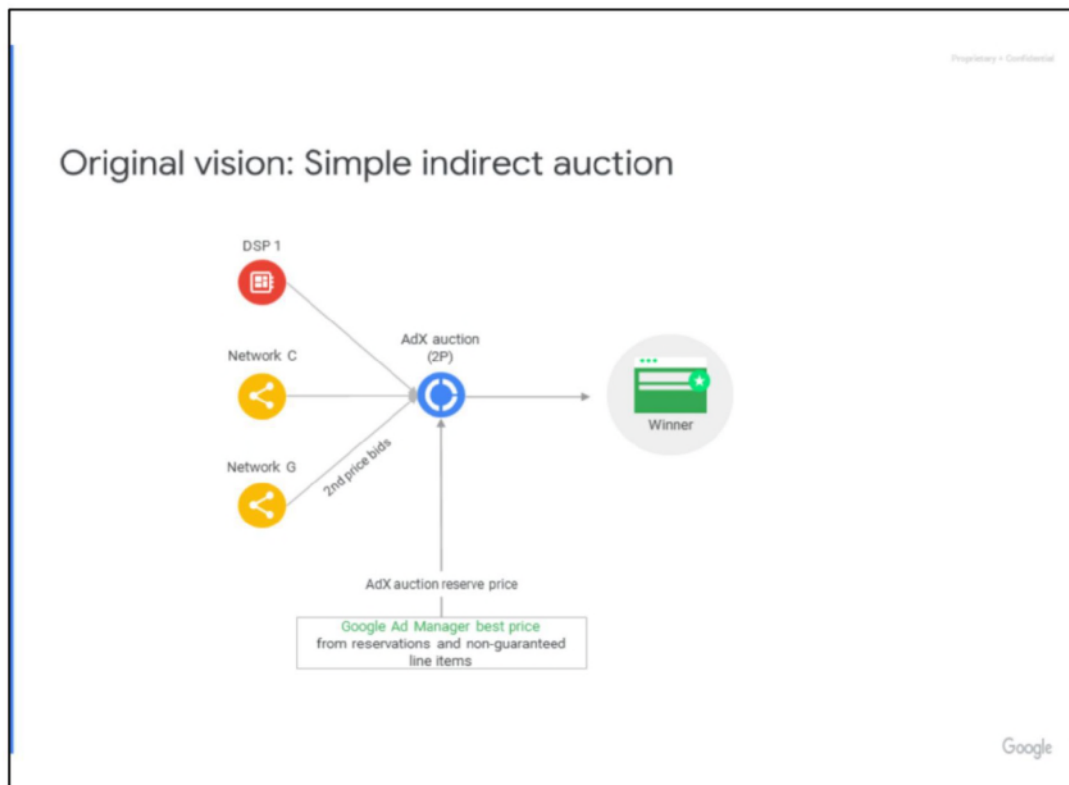


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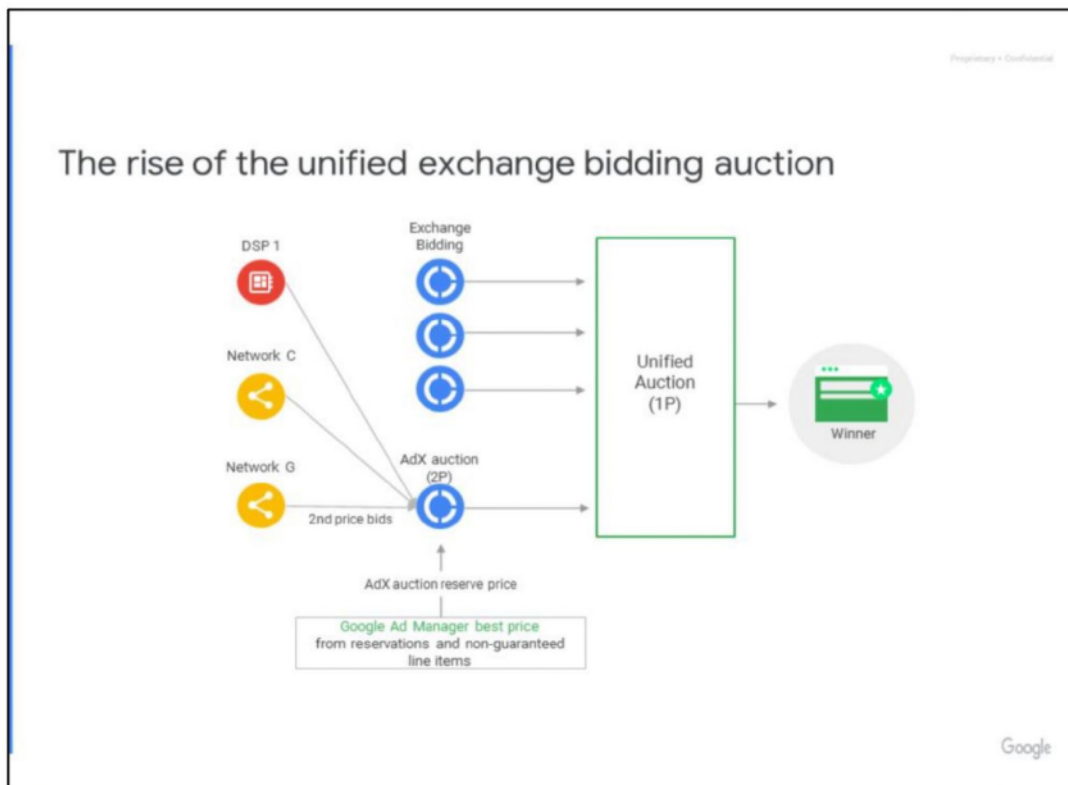
Unified 1st Price Auction



Haskell Garon, Product Manager



- How did all this fit together initially?
- AdX demand - real time auction; We chose a 2P auction because in a single auctioneer environment, it is efficient, incredibly simple for buyers, and gives pubs a better understanding of a buyer's value
- DFP demand - network/exchange tags - represented through average/ fixed prices
- Ad server algorithm (DA) used machine learning to dynamically allocate impressions between these 2 demand sources, to increase yield of your inventory
- No concept of "last look" -- just the way dynamic allocation worked with DFP line items to improve publisher yield
- But this setup could have been improved: as the industry and technology evolved, real time pricing from other exchanges outside AdX through ,will make the pricing for each impression more efficient, and increase yield as a consequence



(FROM PREVIOUS) But this setup could have been improved: as the industry and technology evolved, real time pricing from other exchanges outside AdX through will make the pricing for each impression more efficient, and increase yield as a consequence

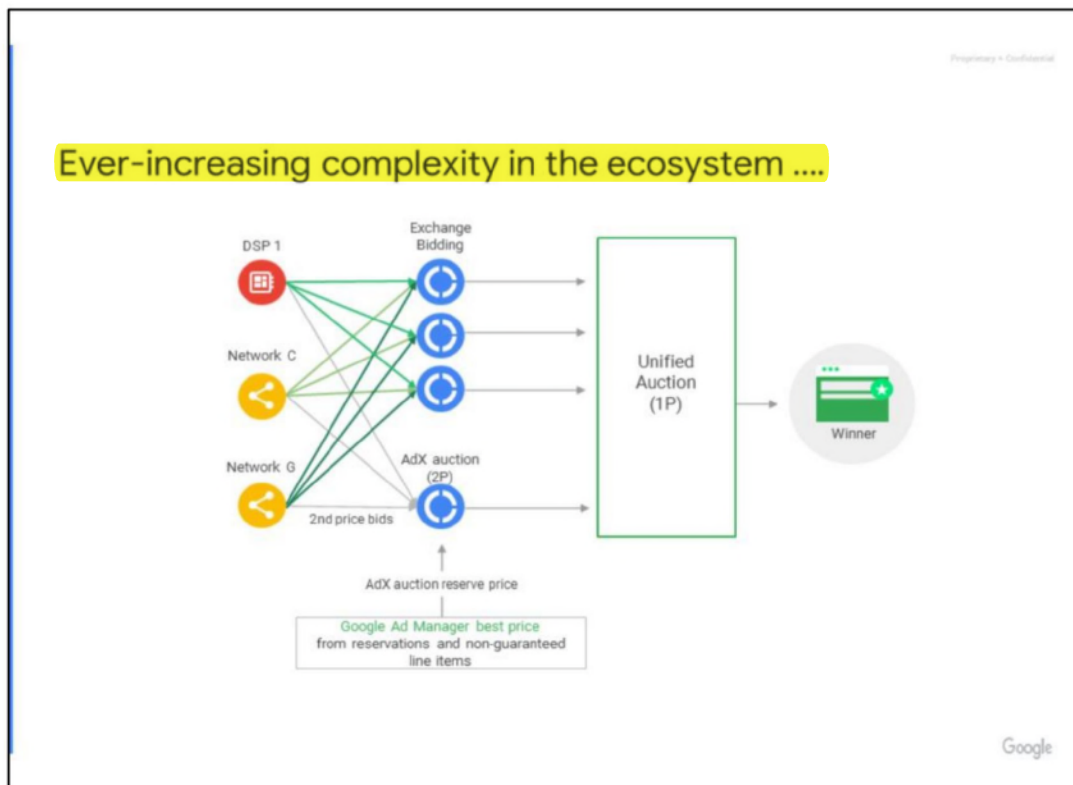
We built Exchange Bidding to solve this problem

Opened up to any exchange that is willing to work with us, allowing them to compete in a real time unified auction, in a market efficient manner

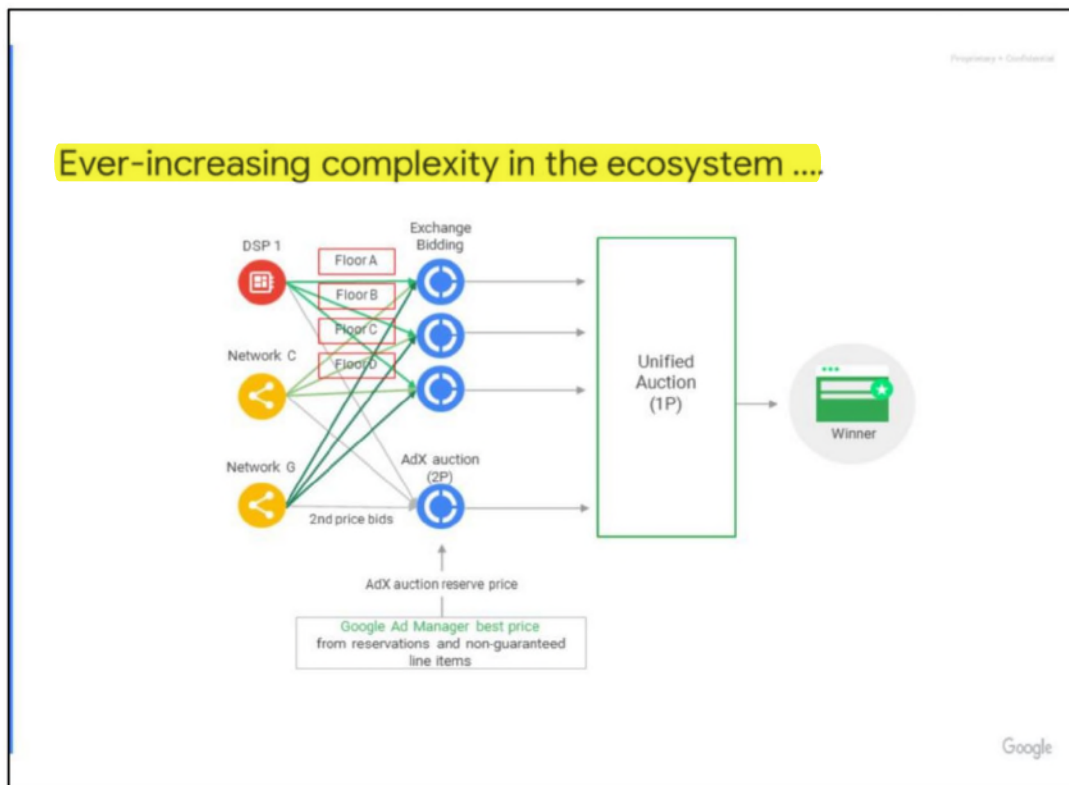
Build the best product -- programmatic and server side; reduced latency; No discrepancies, billing is unified; Centralized reporting, and transparency with bid and transactions files

EB was also our first attempt at running a 1P auction; Since other exchanges already have experience with submitting 1P bids into HB wrappers, it was the easiest way to build out the product. But it complicated the understanding of the DFP auction -- became a multi-stage auction with different auction dynamics

One important thing to keep in mind with this multiple levels of aggregation - it is that the aggregators overlap, sometimes completely.



- And the overlap is not even as clean as the previous slide suggests. It's even more complex, multiple calls multiple layers of overlap



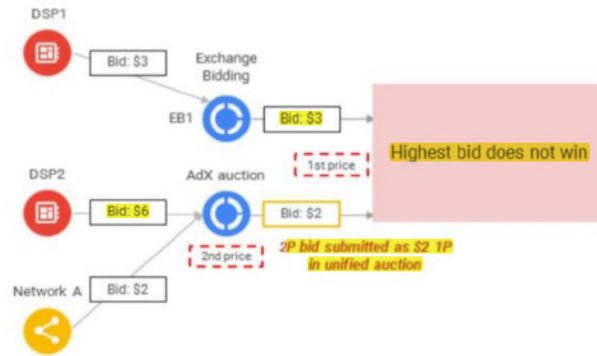
- And the overlap is not even as clean as the previous slide suggests. It's even more complex, with multiple auctioneers, multiple calls multiple layers of overlap
- Differential prices -- and above all that, the prices for the same inventory are different through different channels
- Different rules - And to make things worse, each channel competes with different rules (auction dynamics, floors, information access, etc). Each channel has some advantage and some disadvantage over other channels for the same demand.
- We reached a point where adding more pipes does not bring in incremental demand, but only makes understanding the value added by each player in this complicated ecosystem harder
- For pubs
- Has led to using increasingly complex yield strategies where each source of unique budgets are called multiple times with different floors
- Also find it hard to understand which intermediary and yield strategies are adding true unique/incremental value, -- hard to make informed optimal decisions when you're understanding of the market is not completely clear
- For buyers also this has led to inefficiencies - Introduce Haskell
- This exponentially increases the volume of queries in the ecosystem and the amount of duplication, with buyers dealing with multiple instances of the same impression
- This results in self competition for the buyer

- It also forces buyers to throttle queries to deal with the volume, making it harder to evaluate which impressions are most valuable, impacting publisher yield

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...has resulted in outcomes that aren't always market efficient

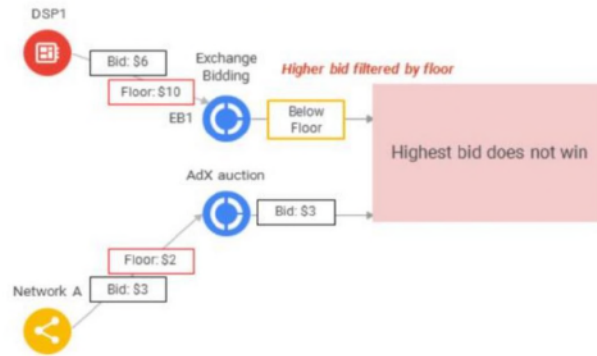
Example 1: Differential auction dynamics



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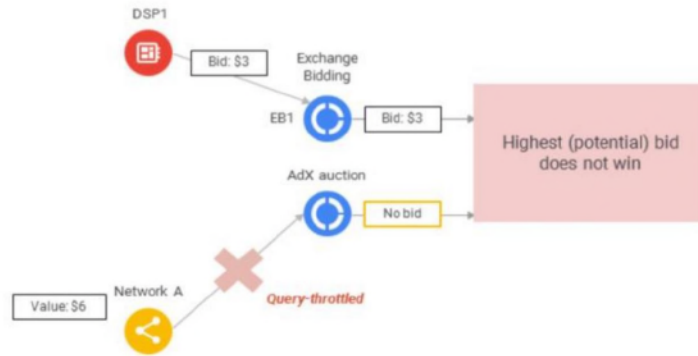
Example 2: Differential floor prices



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...has resulted in outcomes that aren't always market efficient

Example 3: Arbitrary cuts to quota



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